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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,603

10/26/2006

Gert Bauknecht

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EXAMINER

KENNEDY, JOSHUA T

ART UNIT

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3679

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,603	Applicant(s) BAUKNECHT, GERT	
	Examiner JOSHUA T. KENNEDY	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show angle (beta) as described in the specification. Further, the drawings are objected to because they fail to include cross hatching for the various sectioned components. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 1-4 have been cancelled.

Claims 5-8 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loe et al (US Patent 6,811,349) in view of Hayman (US Patent 5,005,877).

With respect to claims 5 and 6, Loe et al disclose a disk carrier (Fig 1) with a complementary profile (32) for acceptance of a disk packet (30), which is axially affixed by a snap ring (36) inserted in a groove (34), the groove having an internal circumferential surface (44) and two groove sides (38,40), the snap ring having two flat faces (46, 48), a first groove side (40) which abuts against the snap ring (36) having an undercut with a first angle of inclination (A), the groove (34) providing a slanted surface (40) at the first angle of inclination (A) with reference to a radial plane, the two flat surfaces (46, 48) of the snap ring being conically inclined with respect to one another at a second angle of inclination (B), and a maximum width of the snap ring being placed adjacent the internal circumferential surface of the groove (Fig 1).

However, Loe et al do not disclose the first groove side being parallel to a second groove side.

Hayman discloses a similar retaining ring (82) being held in an inclined circumferential groove (78) having first and second sides being parallel to each other (Fig 5) which allows for the insertion and release of the retaining to be easier since "the force applied to the locking bodies is aligned with the direction that the [ring] move[s]" (Col 6, Lines 47-53) and further the "angled channel 78 is also easier to machine in the inside surface...and allows the [profile] to be made as a single piece. This provides greater strength and reduces the cost" (Col 6, Lines 53-58). It would have been obvious to one of ordinary skill in the art to modify the groove of Loe et al to have inclined, parallel walls to allow for easier manufacture, while having a greater strength and a reduced cost.

Further Loe et al do not disclose the second angle of inclination being greater than the first angle of inclination. It is not inventive to state the optimum values of angle of the grooves. Through routine experimentation and optimization, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the groove of Loe et al to have the second angle of inclination being greater than the first angle of inclination because this is merely the application of the of the expected level of skill on the part of one of ordinary skill. No new and unexpected results are produced.

It is noted that the specific method of forming is not germane to the issue of patentability of the device itself. Therefore, the limitation "the groove being made by stamping" has been given only limited patentable weight and does not serve to structurally distinguish the claims. See MPEP § 2113.

Further with respect to claim 6, Loe et al disclose the disk carrier significantly as claimed but do not disclose it as an outside disk carrier and the complementary profile being an inner profile. It would have been obvious to a person of ordinary skill in the art to modify the snap ring assembly as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to include the groove and snap ring on an outside disk carrier and wherein the complementary profile is an inside profile in order to gain the commonly understood benefits and applications of such an adaptation and/or modification having results that would be predictable to one of ordinary skill in the art.

With respect to claim 7, Loe et al disclose the disk carrier being an inside disk carrier and the complementary profile is an outside profile (2).

With respect to claim 8, Loe et al disclose the first and the second angles of inclination (A,B) are respectively related to the reference plane (E), which is a radially positioned plane, but do not disclose the first angle of inclination being about 2°. It is not inventive to state the optimum values of the first angle of inclination. Through routine experimentation and optimization in finding a desired strength of connection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first angle of inclination of Loe et al to have the be about 2° because this is

merely the application of the of the expected level of skill on the part of one of ordinary skill. No new and unexpected results are produced.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 2968503, 1767217, 3962951, 3347293, 2379053, 5937985, 6546234, 5120153 and US Patent Application Publications 2002/0182029 and 2004/0012201 all cited to show similar retainer ring assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/
Examiner, Art Unit 3679

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679